September 8th	420
October 20th	250
November 11th	7

August 23rd was an ideal night for moths, really warm with no wind. I ran the trap on the roof mentioned earlier. I could hardly believe my eyes as I inspected the trap the following morning for inside were layers upon layers of moths! The egg cartons could not be seen for them—a gratifying sight. Having counted up to 2,000 the moths were becoming restless, jostling each other and flying so much that I was unable to count individually and consequently I estimated reasonably accurately the remainder to be a further 2,000.

The more interesting or rare moths caught were:-

Cerura vinula (Puss moth)	1st June
Cucullia umbratica L. (Shark)	4th June
Polychrisia moneta Fab. (Golden Plusia)	28th June
Harypia furcula (Sallow Kitten)	28th June
D. porcellus (Small Elephant Hawk)	1st July
Pseudoips prasinana L. (Scarce Silver Lines)	5th July
Cosmia pyralina Schiff. (Lunar Spotted Pinion)	13th and 19th July
Gastropacha quercifolia L. (Lappet)	4th August
Eremobia ochroleuca Schiff. (Dusky Sallow)	23rd August
Atethemia xerampelina Esp. (Centre Barred	
Sallow)	30th August
Nymphalis io L. (Peacock Butterfly)	8th September

I was very pleased to catch *D. porcellus* on the night of the 1st July (following the African Dust Storm). *P. prasinana* was also a very pleasing catch, but the most unusual was *N. io* on September 8th.

It is interesting to note that while on holiday in Ripon, Yorkshire, on August 2nd two *Plusia bractea* Schiff. (Gold Spangle) moths visited the trap.

I feel my first year with a trap has been most interesting and rewarding.

Charlecote, near Warwick.

Ross-shire and Sutherland Lepidoptera Records

By DEREK C. HULME

Some important notes and papers giving lepidoptera records from the northern counties of Scotland have been published recently. These include "Some Random Scottish Records" by Austin Richardson (*Ent. Rec.*, **77**: 16-17), "Lepidoptera of the Beinn Eighe Nature Reserve" by John E. Knight and F. R. Sutton (*Ent. Gaz.*, **17**: 125-128) and "A Holiday in Rossshire, Scotland in late July 1967" by E. P. Wiltshire (*Ent. Rec.*, **79**: 310-313). The first paper includes five species from Loch Maree; the second, a full list of species collected on this Ross-shire reserve in 1961/64 and the third, notes the lepidoptera of the Contin district—only seven miles from my home at Muir of Ord. I feel, after being resident in Ross-shire since late 1963, that I should add a contribution.

I have had little spare time for serious mothing though I have made a point of noting every specimen that has come my way. The present list for Vice-Counties 105 (West Ross), 106 (East Ross), 107 (East Sutherland) and 108 (West Sutherland) is very far from complete. A few widely separated nights operating a blended light have produced a number of nocturnal species not encountered by other means and highlighted the inadequacies of my rather random method of observation.

The National Grid 10km square is given for each locality except Muir of Ord, which is NH55 unless otherwise stated. Lepidoptera taken solely at Muir of Ord, not requiring special comment, are listed at the end of Part One. Species recorded for Handa are given separately at the end of Part Two. Nomenclature is after Heslop's *Revised Check-list of the British Lepidoptera*, 1964.

Part One-Ross-shire

Pieris brassicae L. Fairly common with a flight period extending from 29th May (1964) to 2nd October (also 1964) P. rapae L. Rare. One at Mellon Udrigle (NG89) on 20th July 1960. Muir of Ord, 8th/29th May 1964, five and (NH54), 25th July 1965, one. P. napi L. South 1941 states that its range northwards does not seem to extend beyond Ross. The species is fairly common in East Ross, with a flight period from 23rd April (1968) to 23rd September (1966) though none observed in the period 20th June/28th July. Not guite so common in West Ross though seen along the coast from Lochcarron (NG93) northwards to Inverbroom Eumenis semele L. Three on dunes at Big Sand, Gairloch (NH18) (NG77), 11th/14th August, 1963. Three on low sandstone cliff at Rosemarkie (NH75), 8th August, 1967. Erebia aethiops Esp. Fairly common at Muir of Ord (NH54 & 55) and Strathpeffer (NH45), especially in late July/mid-August period. Maniola jurtina L. Common at Muir or Ord (NH44, 45, 54 & 55), with a flight period from 27th June (1968) to 29th August (1968). Few noted in West Ross but a colony recorded on Tanera More, Summer Isles (NB90), 13th July 1965 and 6th July 1966. Coenonympha pamphilus L. Fairly common at Muir of Ord, with a flight period from 14th June (1968) to 27th August (1966), and recorded also in squares NH44, 45 and 65. C. tullia Müll. Glen Torridon (NG85), 5th and 17th July 1966, seven and one. Five on Ben Wyvis (NH46) on 26th July 1968. Vanessa atalanta L. Seen on twelve occasions at Muir of Ord in the years 1964/68-all but two specimens flying in the month of Septem-V. cardui L. One at Tarbet Ness lighthouse (NH98) on 17th June ber. 1965. Singles at Muir of Ord on 16th June; 20th, 22nd, 23rd and 25th September 1966 and 2nd October 1968. Aglais urticae L. Fairly common at Muir of Ord between the extreme dates of 28th March (1965) and 27th October (1964). Observed also in squares NC19; NG87, 88, 89; NH06, 09, 44, 45, 46, 54, 59, 65, 75, 85, 86 and 98. Argynnis aglaia L. Two at Muir of Ord (NH44 & 54) on 21st July 1966 and one at Strathpeffer (NH45) on 10th August 1967. Clossiana euphrosyne L. One specimen only taken and examined carefully before release at Muir of Ord on 24th June 1965. South 1941 states that it is not uncommon in Sutherland but I have not encountered this species in that county. C. selene Schiff. Fairly common in a very restricted locality at Muir of Ord, between 17th June (1967 and 1968) and 19th July (1965). Earliest specimen caught at Munlochy (NH65) on 5th June 1968. Lycaena phlaeas L. Noted between the dates of 21st August (1967) and 26th September (1968) at Muir of Ord, but not in numbers until 1968 when 22 were recorded. One also at Strathpeffer (NH45) on 25th August 1968. South 1941 states that it does

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not extend beyond the Caledonian Canal while Ford 1945 gives a wider distribution to the north coast of Scotland. Polyommatus icarus Rott. Thinly and widely distributed over East Ross. Seen in flight between 22nd June (1967) and 29th August (1968) in squares NH44, 45, 55, 65, and 75. Increase in 1968 when 32 were counted at Muir of Ord. One on Tanera Beg, Summer Isles (NB90) on 1st July 1968—my only record for West Ross. Celastrina argiolus L. A φ caught at Munlochy (NH65) on 4th July 1966. Erynnis tages L. An unexpected specimen taken at Muir of Ord on 23rd May 1964. Four noted here between 29th May and 9th June in 1965 but not found in subsequent years.

Lasiocampa quercus L. A larva on heather at Mellon Udrigle (NG89) on 20th July 1960. Macrothylacia rubi L. A larva on silverweed at Mellon Udrigle (NG89) on 20th July 1960. Fifteen larvae on grasses at Gairloch (NG77), 11/14th August 1963. Saturnia pavonia L. Commonly seen in the larval state in squares NG77, 99; NH06 and 44. Lithosia quadra L. A d taken resting on broom in bright sunshine at Muir of Ord on 26th June 1967. South 1961 does not mention a Scottish record. Parasemia plantaginis L. A Q taken in Glen Torridon (NG85) on 5th July 1966.

Hepialus fusconebulosa Deg. A wing found in my Muir of Ord garden on 17th July 1964. *H. hecta* L. Singles at Muir of Ord on 15th and 22nd July 1965 and 7th July 1968. South 1961 gives "Scotland to Aberdeen and the Hebrides".

Amathes sexstrigata Haw. One flying at dusk at Muir of Ord on 25th July 1966. South 1961 gives the range "as far north as Moray". Euschesis janthina Schiff. Three at blended light at Muir of Ord on 18th August 1965. South 1961 again gives "as far north as Moray". Noctua pronuba L. Recorded in square NH55 cnly, with a mere ten specimens in five seasons. Tentative flight period, 29th July to 31st August Ceramica pisi L. A larva found in Kerrysdale (NG87) on 18th July Cerapteryx graminis L. Common in late July and throughout 1960. August. Recorded in squares NG77; NH06, 55 and 86. Orthosia gothica Found in late April at Muir of Ord and Strathpeffer (NH45). L. Six taken at blended light on 29th April 1966 included a Scottish variety with markings outlined in yellow. Hydraecia oculea L. One at Dingwall (NH55) on 7th August 1963. Aporophyla lunula Stroem. Singles found in Muir of Ord garden shed on 31st August and 4th October 1966. Agrochola lychnidis Schiff. An ab. serrina F. at Muir of Ord on 31st August South 1961 states "through Scotland to Perthshire it is very local". 1966. Tiliacea citrago L. Singles taken at Muir of Ord on 22nd September 1965, 31st August 1966 and 25th August 1967. South 1961 gives only two Scottish records. Plusia gamma L. Common only in 1966 when over 150 seen at Muir of Ord between 5th June and 30th October. Also one at Munlochy (NH65) on 8th June 1966. Phytometra viridaria Clerck. A typical specimen at Muir of Ord on 9th June 1968. South 1961 states that it does not appear to occur beyond Inverness-shire.

Scopula lactata Haw. About 20 in Glen Torridon (NG85) on 5th July 1966. Xanthorhoe spadicearia Schiff. One at Muir of Ord on 7th June 1966. South 1961 gives the range northwards to Aberdeen. X. montanata Schiff. Recorded in squares NH08, 54, 55, 98; NB90. Fairly common with a flight period of 16th June (1966) to 25th July (1964 and 1966). Colostygia pectinataria Knoch. Fairly common at Muir of Ord in July. One in Glen Torridon (NG85) on 10th August 1963. C. didymata L. One

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in Strathconon (NH25) on 27th July 1966. Fairly common at Muir of Ord mid-June to mid-August. Anticlea derivata Schiff. Singles at electric light at Strathpeffer (NH45) on 29th April 1967 and Muir of Ord on 19th April 1968. Entephria caesiata Schiff. Abundant on lichen-covered conglomerate rock faces in Urray (NH44 and 45) and Strathconon (NH25). Euphyia bilineata L. Besides Muir of Ord records, I have notes of one at the Falls of Glomach (NH02) on 24th July 1965 and two on Tanera Beg, Summer Isles (NB90) on 1st July 1968. Dysstroma citrata L. At Muir of Ord and one taken at Gairloch (NH77) on 13th August 1963. Thera firmata Hübn. Singles taken at Muir of Ord on 21st and 22nd September 1965. South 1961 states that it is found up to Aberdeen, and also in the Hebrides. Rheumaptera hastata L. A ssp. nigrescens Cockerell in Glen Torridon (NG85) on 5th July 1966. Epirrhoe alternata Müll. Over 20 taken at Muir of Ord between 22nd July and 10th August 1966. Also a late specimen at Gairloch (NG77) on 13th August 1963. Pelurga comitata L. One in dunes at Gairloch (NG77) on 14th August 1963. Abraxas grossulariata L. Four on Tanera More, Summer Isles (NB90) on 13th July 1965. Erannis aurantiaria Hübn. Single d d taken at Muir of Ord on 10th November 1965 and 18th November 1966. South 1961 quotes few Scottish records with the range extending northwards to Selenia bilunaria Esp. One of the second generation Inverness-shire. at Cromarty (NH86) on 4th June 1965. Phigalia pilosaria Schiff. Single d d taken at Muir of Ord on 1st February 1964 and 28th February 1966. South 1961 gives Aberdeen as the northern limit. Alcis repandata L. Α melanic specimen in Inverewe Garden (NB88) on 12th July 1965. Ectropis biundularia Borkh. Singles at the Falls of Rogie (NH45) and Glen Torridon (NG85) on 5th July 1966. Ematurga atomaria L. Abundant with records from squares NG85; NH02, 06, 19, 45 and 55, between the extreme dates of 26th April (1964) and 15th July (1965). Bupalus pinaria L. Common at Muir of Ord and also recorded in Glen Torridon (NG85) on 5th July 1966.

Obsibotys fuscalis Schiff. One at Braemore Junction (NH27) on 3rd July 1966. Crambus hortuellus Hübn. Common at Muir of Ord; also a few noted at Braemore Junction (NH27) on 3rd July 1966 and ten on Tanera More, Summer Isles (NB90) on 6th July 1966. Agriphila culmellus L. Abundant in squares NH25, 44, 45, 54 and 55 and also seen in NG91; NH27 and 68. Flight period 30th June (1966) to 3rd September (1965). A. tristellus Schiff. Fairly common at Muir of Ord, flying between 22nd July (1964 and 1965) and 3rd September (1966). Recorded also in Strathconon (NH25). Alucita hexadactyla L. Singles at Muir of Ord on 6th November 1964, 19th October 1967 and 23rd October 1968.

Hofmannophila pseudospretella Staint. Common in our new house in 1964 and 1965. Not recorded in subsequent years which makes me wonder whether we brought ova and larvae with us in carpets and furniture from Derby. It is a Ross-shire insect, however, as I found two in a Kyle of Lochalsh hotel (NG72) on 28th June 1957. Anthophila fabriciana L. Fairly common at Muir of Ord (NH54 and 55) in the years 1964/66 but not one observed here subsequently. Flight period 24th May to 20th October. One taken at Ullapool (NH19) on 1st July 1968. Argyresthia goedartella L. Eight at the Falls of Rogie (NH45) on 26th July 1967.

The parish of Muir of Ord (Urray) is one of the wildest and least known in Britain. It embraces more than fifty peaks over 2000 feet; no less than sixteen of these are over 3000 feet and the highest, Sgurr a' Choire-Ghlais, is only six feet lower than Snowdon! Most of the ground is utterly remote heather moor, with shapely peaks and rocky cnocs. The numerous lochs and streams drain into the River Orrin—the longest river in Ross-shire. The only fertile and well-wooded areas are close to the Moray Firth and in lovely Strathconon. The rapidly expanding village is built on alluvial flats of glacial gravel and sand, overlying the Middle Old Red Sandstone. Further inland exposed conglomerates give way to the Moine Series schists. The following moths were taken solely in Muir of Ord (NH55), many by my eldest son, Kyle. It is hoped to fill out this bare list with flight period and other data at a later date.

Poecilocampa populi L., Spilosoma lubricipeda L., Phragmatobia fuliginosa L. (including φ ssp. borealis Staud.).

Amathes glareosa Esp., Euschesis comes Hübn., Diataraxia oleracea L., Hadena thalassina Hufn., Orthosia cruda Schiff., O. stabilis Schiff., O. incerta Hufn., O. gracilis Schiff., Leucania pallens L., L. lythargyria Esp., Arenostola pygmina Haw., Apamea monoglypha Hufn., A. crenata Hufn., A. secalis L., Procus fasciuncula Schiff., Amphipyra tragopoginis Clerck. Apatele rumicis L., Griposia aprilina L., Antitype chi L., Eupsilia transversa Hufn., Citria lutea Stroem, Conistra vaccini L. ab. mixta Staud., Plusia bractea Schiff., P. pulchrina Haw., Hypena proboscidalis L.

Sterrha aversata L. (NH44 and 55), S. biselata Hufn., Xanthorhoe munitata Hübn., X. designata Hufn., X. fluctuata L., Colyostygia multistrigaria Haw., Earophila badiata Schiff., Perizoma blandiata Schiff., P. alchemillata L., Lampropteryx suffumata Schiff. (including melanic ab. piceata Steph.), Electrophaes corylata Thunb. (an ab. ruptata Hübn.), Lygris testata L., L. populata L. (NH44 and 55, including ab. fuscata Prout), Cidaria fulvata Forst., Chloroclysta siterata Hufn., C. miata L., Dysstroma truncata Hufn. (NH44 only), D. concinnata Steph., Thera obeliscata Hübn. (an ab. obilterata B. White), Hydriomena furcata Thunb. (ab. sordidata F.), Chesias legatella Schiff., Trichopteryx carpinata Borkh. (ab. fascinata Prout), Ortholitha mucronata Scop., Oporinia dilutata Schiff., O. christyi Prout, Operophtera brumata L. (including a 5 ab. huenei Prout), Eupithecia intricata Zett. (ssp. millieraria Wnuk). E. icterata Vill., E. indigata Hübn., E. sobrinata Hübn., Gymnoscelis pumilata Hübn., Lomaspilis marginata L., Deilinia pusaria L., Campaea margaritata L., Gonodontis bidentata Clerck, Itame brunneata Thunb. (NH44 only).

Udea lutealis Hübn., U. olivalis Schiff., Crambus pratellus L., C. perlellus Scop., Stenoptilia bipunctidactlya Scop., Amblytilia punctidactyla Haw. (NH44 and 55), Platyptilia pallidactyla Haw.

Pandemis corylana F., Syndemis musculana Hübn., Acleris schalleriana L., A. variegana Schiff., A. ferrugana Schiff., Laspeyresia succedana Schiff., L. aurana F., Grapholita jungiella L., Epiblema farfarae Fletch., E. costipunctana Haw., Pardia cynosbatella L., Epinotia stroemiana F., Ancylis unguicella L., A. badiana Schiff., Olethreutes palustrana Zell., O. lacunana Schiff., O. rivulana Scop., Celyphoides cespitana Hübn.

Endrosis sarcitrella L., Diurnea fagella F., Agonopterix arenella Schiff., Coleophora anatipennella Hübn., Plutella maculipennis Curt., Nemophora swammerdammella L.

(to be continued)